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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/257,506	02/25/1999	TATSUYA MATSUMURA	50073-019	2315

20277 7590 07/14/2003

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EXAMINER

NELSON, ALECIA DIANE

ART UNIT	PAPER NUMBER
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2675

DATE MAILED: 07/14/2003

18

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/257,506

Applicant(s)

MATSUMURA ET AL.

Examiner

Alecia D. Nelson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 17.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 4/29/03 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner has considered the information disclosure statement.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

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3. **Claims 1-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimamoto (U.S. Patent No. 6,147,672) in view of Takahashi et al. (U.S. Patent No. 5,604,513).

With reference to the claims, there is taught a driving method of a liquid crystal display characterized in that when red, green, and blue color display data composed of plural bits (see column 5, lines 46-49) are transferred from a display timing circuit to a TFT drive circuit for driving a TFT liquid crystal panel to display (see column 6, lines 32-37). There is also taught a first control circuit for outputting the data of the group represented by certain data to the signal line when the coincidence of polarity has been detected by the detector circuit; and a second control circuit for outputting the data of the group restored from the certain data of the signal line to the drive circuit when the coincidence of polarity of bit has been detected by the detector circuit (see column 6, line 56-column 7, line 26).

Shimamoto fails to specifically teach that the transfer is performed with a time lag little by little for each bit unit formed of plural bits optionally selected from each of the color display data. However it is taught that it is necessary to slow down the transfer of display data (see column 1, lines 35-49).

Takahashi et al. teaches a serial sampling video signal driving apparatus, which receives a plurality of color video signals, and is comprised of a control signal generator (1), delay circuit (3), a signal processing circuit (5), and a serial sampling video driver (10). A vertical synch signal (Vvd), a horizontal synch signal (Vhd) and red (Vvr), green (Vvg), and blue (Vvb) analog signals are inputted from a device such as a computer.

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The serial sampling video driver (10) provides output signals to a connected color display (see column 2, lines 14-23). The delay circuit (3) comprises a 1/3-dot delay line (7) and a 2/3-dot delay line (9). The 1/3-dot delay line (7) receives the green analog video input signal (Vvg) and delays it by an amount equal to one-third the period of the dot clock to produce a phase compensated green analog video input signal (Vvgc). The 2/3-dot delay line (9) receives the blue analog video input signal (Vvb) and delays it by an amount equal to two-thirds the period of the dot clock to produce a phase-compensated blue analog video input signal (Vvbc) (see column 2, lines 31-40). It is further taught that since each of the three video signals is sampled once per dot, the dot clock period (tvo) is three times the interval between successive sampling pulses (see Figure 4, column 4, lines 18-42).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to reduce the electromagnetic interference by delaying the rate of the DATA signals in which they are to lag from one another, as taught by Takahashi et al., in an apparatus similar to that which is taught by Shimamoto to thereby reduce EMI without significantly impacting on display performance.

Response to Arguments

4. Applicant's arguments filed 4/29/03 have been fully considered but they are not persuasive. The applicant argues that there is no motivation to combine Shimamoto and Takahashi. However, it is not necessary that the references actually suggest, expressly or in so many words, the changes or improvement that the applicant has made. The

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test for combining references is what the references as a whole would have suggested to one of ordinary skill in the art. Further if it is obvious to combine references for one reason it is obvious to combine references for all reasons. Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to combine that, which is taught by Takahashi et al. to that which is taught by Shimamoto in order to provide a matrix-type color display with improved color while reducing EMI thereby improving the overall display quality of the display device.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alecia D. Nelson whose telephone number is (703)305-0143. The examiner can normally be reached on Monday-Friday 9:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Saras can be reached on (703)305-9720. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9314 for regular communications and (703)872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-9700.

adnADN
July 10, 2003



**DENNIS-DOON CHOW
PRIMARY EXAMINER**